

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claim 15 is amended for non-substantive reasons. Claims 1-15 are pending.

I. Objection to the Specification

In the Office Action, at page 2, numbered paragraph 2, the specification was objected to. The specification was amended in light of the Examiner's comments, and accordingly, withdrawal of the objection to the specification is respectfully requested.

II. Rejections under 35 U.S.C. § 103

Matsuzaki, Bertram, Masukura and Lyle

In the Office Action, at page 3, numbered paragraph 5, claims 1, 2, 5, 6, and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0145336 to Matsuzaki et al. in view of U.S. Patent No. 5,657,091 to Bertram, further in view of U.S. Patent No. 6,989,868 to Masukura, further in view of U.S. Patent No. 7,035,290 to Lyle. This rejection is respectfully traversed because Matsuzaki et al. does not discuss or suggest:

a video memory to temporarily store the video data generated through the video processing part and the user data stored in the hard disk,

a data transmitting part to output the video data and the user data temporarily stored in the video memory through the video connector;

a data receiving part to receive the video data and the user data provided from the computer body through the body connection part, [and]

a control part to display the video data received through the data receiving part to the display part and to output the user data to the external apparatus connected to the external apparatus connecting part,

as recited in independent claim 1.

As a non-limiting example, the present invention according to claim 1, for example, is directed to a computer system including a computer body and a display apparatus. The computer body includes a hard disk to store user data, a video connector to transmit data, a video processing part to generate video data, a video memory and a data transmitting part. The video memory temporarily stores the video data generated through the video processing part and the user data stored in the hard disk. The data transmitting part outputs the video data and the user data temporarily stored in the video memory through the video connector. The display

apparatus includes a display part, a body connection part to connect to the video connector of the computer body, an external apparatus connecting part to connect to an external apparatus, a data receiving part and a control part. The data receiving part receives the video data and the user data provided from the computer body through the body connection part, and the control part displays the video data received through the data receiving part to the display part and outputs the user data to the external apparatus connected to the external apparatus connecting part.

Matsuzaki discusses an encryption transmission system in which a video signal and an audio signal are encrypted and transmitted. A data enable signal for video information and a data enable signal for audio information are encoded by a TDMS encoding unit 213 of a video connection unit 201. A TDMS decoding unit 311 of a video connection unit 301 receives the serial data from the TDMS encoding unit 213 and decodes the data. A display control unit 302 receives a decrypted pixel and a data enable signal DE from the separation unit 313 and horizontal and vertical signals, generates RGB signals and outputs the signals to the CRT unit 303 for display. A speaker control unit 304 receives a decrypted audio cell and a data enable signal from the separation unit 313, decodes the received decrypted audio cell to generate audio information, converts the generated audio information to generate an analog signal and outputs the generated analog signal to the speakers 305, which convert the analog signal to audio to output the generated audio.

As conceded by the Examiner, Matsuzaki does not discuss or suggest that a computer body includes a video memory to temporarily store video data generated through a video processing part and user data stored in a hard disk. The Examiner alleges that a DVD corresponds with a memory of a computer body. The Applicant respectfully disagrees. A computer body cannot be considered to comprise a DVD, as a DVD is a self-contained memory that is external to the computer body itself. Further, the DVD of Matsuzaki is not a memory that stores video data generated through a video processing part. Matsuzaki includes a DVD input/output unit 203 that reads encoded video/audio information from the DVD and outputs the read encoded video/audio information to the video/audio processing unit 202, which receives the encoded video/audio information, separates the video and audio information and outputs generated decoded video information and generated encoded audio information to the video connection unit 201. Matsuzaki does not discuss or suggest that the DVD is a memory that stores video data generated through the video processing part. Matsuzaki also does not suggest that the DVD is a video memory or that the DVD temporarily stores both video data generated through the video processing part and user data stored in a hard disk.

Further, Matsuzaki does not discuss or suggest that a data transmitting part outputs both video data and user data temporarily stored in the video memory through a video connector. Matsuzaki discusses that the video/audio information received from the DVD and processed by the video/audio processing unit 202 is transmitted to a display device 30, but Matsuzaki does not suggest that the audio data is user data nor does Matsuzaki discuss or suggest that the video connection unit 201 outputs video data and user data temporarily stored in a video memory.

In addition, Matsuzaki does not suggest that the display device 30 includes a data receiving part that receives the video data and user data provided from a computer body and a control part that displays the video data received to the display part and outputs the user data to an external apparatus connected to a display apparatus. Matsuzaki discusses that the video connection unit 301 separates the video information and the audio information, outputs the video information to the display control unit that generates RGB signals to be output to the CRT unit 303, and outputs the audio information to the speaker control unit 304 that generates an analog signal to the speaker 305. While Matsuzaki discusses a display control unit 302 and a speaker control unit 304, Matsuzaki does not discuss or suggest that the speaker control unit 304 is a control part that outputs user data received at the computer body through a hard disk and that the user data is output to an external apparatus. Further, the speaker 305 cited in Matsuzaki is not an external apparatus that is external to the display device 30.

The Examiner alleges that Bertram, Masukura and Lyle make up for the deficiencies in Matsuzaki. The Applicant respectfully disagrees.

Bertram discusses a video display controller in which programs stored in memory devices associated with microcontrollers controlling the display to a user are constructed in a language which uses layered statements, each of which can have a description portion, an action portion and a unique connecting character. Bertram discusses, with respect to a video memory that receives and stores video data generated through a video processing part and user data stored in a hard disk, only a DRAM 45 that controls the display of visual images by the video display device. Bertram does not discuss or suggest that the DRAM 45 stores both video data generated at a video processing part and user data stored in a hard disk. The Examiner cites reference number 116, but the Applicant respectfully submits that Bertram includes no such reference number. Further, while video memories for temporarily storing video data may be known in the art, the rejection has failed to show a video memory that temporarily stores both video data generated through a video processing part and user data that is stored in a hard disk, which the Examiner concedes. The Examiner alleges that Masukura makes up for the deficiencies in Matsuzaki and Bertram. The Applicant respectfully disagrees.

Masukura discusses a method of converting the format of encoded video data and an apparatus therefore. The apparatus includes an original video data storage device 1100 and a meta data storage device 1106. The meta data storage device 1106 serves to acquire meta data such as information corresponding to the video stored in the original video data storage device 1100 or encoded video data and user information, and is formed from, for example, a hard disk, optical disk or semiconductor memory in which meta data is stored. A decoder 1101 reads out a video obtained from the original video data storage device 1100, decodes the data if it is encoded, and outputs the video data and speech data of each frame. An encoder 1103 encodes the video data sent from a video data converter 1102 into an encoded video data format, and internal processing, such as selection of encoding parameters, is controlled on the basis of control data from a processing parameter controller 1104. The encoded data is stored in the converted video data storage device 1105 after format conversion, a meta data analyzer 1107 reads and analyzes the meta data obtained from the meta data storage device 1106 and outputs a picture characteristic quantity, speech characteristic quantity, semantic characteristic quantity, content related information and user information to the processing parameter controller 1104, which controls the processing parameters in the decoder 1101, video data converter 1102, and encoder 1103.

While Masukura discusses a storage device 1106 and a video data storage device 1100, the meta data storage device 1106 storing encoded video data and user information, Masukura does not discuss or suggest that the converted video data storage device 1105 is a video memory that temporarily stores video data generated through a video processing part and user data stored in a hard disk. The user encoded video data and user information that is stored in the meta data storage device 1106 is analyzed by the meta data analyzer 1107, which may output user information to the processing parameter controller 1104, which receives the user information and controls the processing parameters in the decoder 1101, the video data converter 1102 and encoder 1103 in accordance with the pieces of information.

However, Masukura does not discuss or suggest that the user information that is stored in the meta data storage device 1106 is stored in the converted video data storage device 1105. Matsukura discusses only that the user information is used by the processing parameter controller 1104 in controlling the processing parameters in the decoder 1101, encoder 1103 and video data converter 1102 before the video data is encoded into an encoded video data format to be sent to and stored in the converted video data storage device 1105. The user information stored in the meta data storage device 1106 is not stored in the converted video data storage device 1105 and is not transmitted to a display apparatus. The converted video data storage device 1105 is installed in a client terminal connected to a network and both video data and user

data are not transmitted from the converted video data storage device 1105 to a display apparatus.

Further, Masukura does not make up for the deficiencies in Masuzaki and Bertram in that Masukura does not discuss or suggest a display apparatus including a data receiving part to receive video data and user data provided from a computer body and a control part to display the video data to a display part and to output the user data to an external apparatus. The Examiner concedes that Masukura, Masuzaki and Bertram do not teach outputting user data to an external apparatus, but indicates that Lyle makes up for the deficiency. The Applicant respectfully disagrees.

Lyle discusses a method and system for temporary interruption of video data transmission including a transmitter 113 and a receiver 115. The transmitter 113 includes a cipher engine 33 that encrypts input video for transmission and control circuitry 43. The receiver 115 includes a cipher engine 35 that decrypts the encrypted video received from the transmitter 113 and control circuitry 45. In a typical implementation, the transmitter 113 is a set-top box having at least one user-actuatable control (e.g., a "video channel" control that can be actuated to select a different video program for transmission over a link 122, or a video mute control that can be actuated to select mute mode operation) and control circuitry 43 is configured to treat a "command" resulting from user actuation of the control as assertion of the inventive "warning" and to trigger mute mode operation of the system in response to such warning. The warning is sent from the transmitter 113 over the link 122 to the receiver 115, and control circuitry 45 responds to the warning by causing cipher engine 35 to enter mute mode operation.

Lyle does not discuss or suggest that video data and user data are transmitted through the transmitter 113, nor does Lyle suggest that video data is controlled by a control part to be displayed at a display part and that user data is controlled to be output to an external apparatus. When a user in Lyle actuates a mute mode operation, the transmitter 113 triggers a mute mode operation and the warning is sent to the receiver 115 which causes the cipher engine 35 to enter a mute mode operation. Lyle does not suggest that the video data is controlled to be displayed at a display part and user data is controlled to be output to an external apparatus. Lyle does not output user data that was temporarily stored in a video memory. Lyle discusses merely that upon actuation of the control in the transmitter 113, the transmitter 113 sends a warning over link 122 to the receiver 115 which responds to that warning by causing the cipher engine 35 to enter a mute mode operation. Causing the cipher engine 35 to enter a mute mode operation is not outputting user data to an external apparatus. The Examiner appears to be making the assertion that the receiver 115 is both an external apparatus and a display part. The control part of the present invention of claim 1 is a control part of a display apparatus. Thus, even assuming,

arguendo, that the warning could be interpreted to be user data, the warning is not received at a display apparatus and then a control part of the display apparatus displays video data to a display part and outputs the warning to an external apparatus. The receiver 115 cannot be a display apparatus, a display part and an external apparatus.

Further, Lyle includes no discussion of a control part that displays video data received through a data receiving part to a display part and that outputs user data to an external apparatus connected to an external apparatus connecting part.

Additionally, the motivation cited to combine the numerous teachings of Matsuzaki, Bertram, Masukura and Lyle does not suggest why one of ordinary skill would be motivated to combine an encryption transmission system which includes a video connection unit that outputs video and audio received from a DVD to a display device that separates the video and audio information to be sent to separate display and speaker control units that individually control a CRT unit and a speaker of Matsuzaki with a memory that only controls the display of visual images of Bertram, a converted video data storage device that only receives video data encoded taking into account processing parameters of Masukura and a system that includes a receiver that receives video information and a warning but that includes no external apparatus that is external to the receiver of Lyle to suggest a video memory that temporarily stores video data generated through a video processing part and user data stored in a hard disk, a data transmitting part that outputs the video data and the user data to a display apparatus, a data receiving part that receives the video data and the user data, and a control part that displays the video data to a display part and that outputs the user data to an external apparatus connected to an external apparatus connecting part, as recited in independent claim 1. None of the numerous motivations cited suggest why the four references should be appropriately combined to suggest all the features of claim 1.

Therefore, as the combination of the teachings of Matsuzaki, Bertram, Masukura and Lyle suggest "a video memory to temporarily store the video data generated through the video processing part and the user data stored in the hard disk, a data transmitting part to output the video data and the user data temporarily stored in the video memory through the video connector; a data receiving part to receive the video data and the user data provided from the computer body through the body connection part, [and] a control part to display the video data received through the data receiving part to the display part and to output the user data to the external apparatus connected to the external apparatus connecting part," as recited in independent claim 1, claim 1 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Claims 2, 5 and 6 depend either directly or indirectly from independent claim 1 and include all the features of claim 1, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 5 recites that “the display apparatus has a buffer temporarily storing the user data received through the data receiving part.” Therefore, claims 2, 5 and 6 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

As to claim 13, as discussed above with respect to claim 1, the combination of the teachings of Matsuzaki, Bertram, Masukura and Lyle does not suggest transmitting data to a display apparatus through a video connector, displaying the video data of the transmitted data as a picture and outputting user data of the transmitted data to an external apparatus that is external with respect to the display apparatus, as recited in independent claim 9. Claim 13 depends directly from claim 9 and includes features of claim 9, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 13 recites “storing the video data and the user data of the hard disk in a predetermined memory, wherein the data that is transmitted is the video data and the user data.” As discussed above, the combination of the references does not suggest that both the video data and the user data are stored in a predetermined memory and the transmitted data is video data and user data. Therefore, claim 13 patentably distinguishes over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Matsuzaki, Bertram, Masukura, Lyle, Fandrianto, Johnson and Charton

In the Office Action, at pages 8-10, numbered paragraphs 11-13, claims 3, 4, 7 and 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Matsuzaki, Bertram, Masukura, Lyle, U.S. Patent No. 5,982,459 to Fandrianto, U.S. Patent No. 6,593,972 to Johnson and U.S. Patent No. 5,621,792 to Charton. This rejection is respectfully traversed.

As discussed above with respect to independent claim 1, from which claims 3, 4, 7 and 8 ultimately depend, the combination of Matsuzaki, Bertram, Masukura, and Lyle does not suggest all the features of independent claim 1. Fandrianto, Johnson, and Charton fail to make up for the deficiencies in the combination of the teachings of Matsuzaki, Bertram, Masukura, and Lyle. Therefore, independent claim 1 patentably distinguishes over the references relied upon. Claims 3, 4, 7, and 8 depend either directly or indirectly from independent claim 1 and include all the features of claim 1, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 3 recites that “the TMDS transmitter comprises RGB data output pins, and compresses the user data and the video data provided from the video memory in a predetermined ratio to output a compressed user and video data through the

respective RGB data output pins.” Therefore, claims 3, 4, 7, and 8 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Matsuzaki and Lyle

In the Office Action, at page 11, numbered paragraph 16, claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuzaki in view of Lyle. This rejection is respectfully traversed because the combination of Matsuzaki and Lyle does not suggest:

transmitting data to the display apparatus through the video connector; and displaying the video data of the transmitted data as a picture and outputting the user data of the transmitted data to an external apparatus connected to the external apparatus connecting part,

as recited in independent claim 9.

As discussed above with respect to independent claim 1, Matsuzaki does not discuss or suggest both displaying the video data of the transmitted data as a picture and outputting the user data of the transmitted data to an external apparatus connected to an external apparatus connecting part. Further, Matsuzaki does not discuss or suggest that data that is transmitted to the display apparatus is user data stored in a hard disk and video data generated by a video processing part.

Lyle fails to make up for the deficiencies in Matsuzaki, as discussed above with respect to claim 1. Specifically, Lyle does not suggest displaying video data of transmitted data as a picture and outputting user data of transmitted data to an external apparatus connected to an external apparatus connecting part. Lyle discusses only that a warning is sent from the transmitter 113 to the receiver 115, where the receiver may be a TV set, a portable MP3 player etc. Further, Lyle does not suggest that data is transmitted to a display apparatus and user data of the transmitted data is output to an external apparatus connected to an external apparatus connecting part. The receiver 115 of Lyle cannot be both a display apparatus and an external apparatus that is connected to an external apparatus connecting part in the display apparatus.

Therefore, as the combination of Matsuzaki and Lyle does not suggest, “providing an external apparatus connecting part in the display apparatus; transmitting data to the display apparatus through the video connector; and displaying the video data of a transmitted data as a picture and outputting the user data of the transmitted data to an external apparatus connected to the external apparatus connecting part,” as recited in independent claim 9, independent claim 9 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Claim 10 depends directly from independent claim 9 and includes all the features of independent claim 9, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 10 recites "compressing the user data and the video data according to a TMDS-based digital data transmission standard, before transmitting the data from the computer body to the display apparatus." Therefore, claim 10 patentably distinguishes over the references relied for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Matsuzaki, Lyle, Johnson, Charton, and Kato

In the Office Action, at pages 12-13, numbered paragraphs 19-21, claims 11, 12 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Matsuzaki, Lyle, Johnson, Charton, and U.S. Patent No. 6,939,177 to Kato. These rejections are respectfully traversed.

As discussed above with respect to independent claim 9, the combination of Matsuzaki and Lyle fails to discuss all the features of independent claim 9. Johnson, Charton, and Kato fail to make up for the deficiencies in Matsuzaki and Lyle. Therefore, independent claim 9 patentably distinguishes over the references relied upon. Claims 11, 12, and 14 depend either directly or indirectly from independent claim 9 and include all the features of claim 9, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 11 recites, "extracting the data; and separating an extracted data into the video data and the user data." Therefore, 11, 12, and 14 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Matsuzaki and Masukura

In the Office Action, at page 14, numbered paragraph 22, claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuzaki in view of Masukura. This rejection is respectfully traversed because the combination of Matsuzaki and Masukura does not suggest:

a video processor to generate video data, a storage unit to store user data, and

a data transmitter to transmit the video data and the user data; an external storage unit to store the user data; and

a display unit, which is connected to the processing unit via a video connector, and which is connected to the external storage unit via an external storage unit connector, to display the video data and to transmit the user data to the external storage unit,

as recited in independent claim 15.

As discussed above with respect to independent claim 1, Matsuzaki does not discuss or suggest that a storage unit stores user data, a data transmitter transmits video data and user data, an external storage unit stores the user data, and a display unit which is connected to a processing unit and which is connected to the external storage unit via an external storage unit connector displays the video data and transmits the user data to the external storage unit. As further discussed above, Masukura fails to make up for the deficiencies in Matsuzaki. Specifically, Masukura does not suggest an external storage unit that stores user data and a display unit which is connected to a processing unit via a video connector and which is connected to the external storage unit via an external storage unit connector displays video data and transmits the user data to the external storage unit. Masukura discusses only a converted video data storage device 105 that stores converted video data after being encoded using processing parameters, but Masukura does not suggest that a display unit displays video data and transmits user data to an external storage unit.

Therefore, as the combination of the teachings of Matsuzaki and Masukura does not suggest, "a storage unit to store user data, and a data transmitter to transmit the video data and the user data; an external storage unit to store the user data; and a display unit, which is connected to the processing unit via a video connector, and which is connected to the external storage unit via an external storage unit connector, to display the video data and to transmit the user data to the external storage unit," as recited in independent claim 15, claim 15 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Conclusion

In accordance with the foregoing, claims 1-15 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

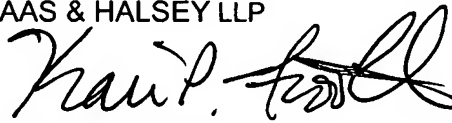
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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